



Report No.: 170400387TWN-001

Date: May 03, 2017

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TEST REPORT

<u>Applicant:</u>	Belkin International Inc.
<u>Address:</u>	12045 East Waterfront Drive, Playa Vista, CA 90094, USA
<u>Product:</u>	Rechargeable Li-ion Battery Pack
<u>Model:</u>	F7U020
<u>Trade Name:</u>	belkin
<u>Rating:</u>	Input: 5Vdc, 2A Output: 5Vdc, 2.4A (each port 2.4A max.)
<u>Sample receipt date:</u>	April 25, 2017
<u>Date of Performance of Test:</u>	April 26, 2017 – April 27, 2017
<u>Organization performing the test:</u>	Intertek Testing Services Taiwan Ltd. 5F, 423, Ruiguang Road, Neihu District, Taipei 114, Taiwan.
<u>Testing Requirement:</u>	CEC-400-2015-021, Table W-2: Standards for Small Battery Chargers Systems according to 10 CFR Section 430.23(aa) (Appendix Y to Subpart B of Part 430)
<u>Conclusion:</u>	From the results of our testing on the submitted sample(s), we are of the opinion that the submitted sample(s) COMPLY WITH CEC-400-2015-021 Table W-2 requirements for Small Battery Chargers Systems

Intertek Testing Services Taiwan Ltd.

Prepared by:

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Project Engineer

Prepared by:

Jason Chen
Senior Engineer



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Remark:

- 1) The testing results relate only to the items tested.
- 2) The test report shall not be reproduced except in full, without written approval of the laboratory.
- 3) This test report only allows to be revised within three years from its original issued date unless a further updating to the standard or requirement is noticed.
- 4) When determining the test conclusion, the Measurement Uncertainty of test has been considered.

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General Technical Information:

1. UUT manufacturer:

SHENZHEN DBK ELECTRONICS CO., LTD

1st-5th floor Building 1, Jinyuan company Longhua Industrial Park, the north of Longguan Rd Hualian Community, Longhua Town, 518109 Baoan District, Shenzhen, Guangdong, China

2. UUT model no. and serial no.:

F7U020 (serial no.: N/A)

3. Manufacturer and model number of battery charger

N/A

4. Manufacturer, model no. and serial no. of battery

DBK, 1166110 (serial no.: N/A)

5. Standard size or type of battery

Li-ion Battery

6. Number of batteries employed in the test

2

7. Battery chemistry

Li-ion Battery

8. Rated battery voltage (V)

5 Vdc

9. Rated battery capacity (Ah or mAh)

6070 mAh

10. Any information provided by the manufacturer regarding access to the battery, particular safety requirements, etc.

N/A

11. Whether the battery charger system is detachable, integral, swappable, or does not meet any of these definitions.

Integral

12. Whether the battery charger system includes a cradle.

No

13. Other functionality of battery charger

N/A



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Test Result:

	Measured Value	Mean	UCL/1.05	Represented Value
1. Duration of the charge and maintenance mode test, t _{cd} (hrs)	24	-		24
2. Battery discharge energy, E _{batt} (Wh)	Sample A: 32.01 Sample B: 31.88	31.95		31.95
3. Battery maintenance mode power, P _m (W)	Sample A: 0.10 Sample B: 0.10	0.10		0.10
4. 24 hour charger and maintenance energy, E ₂₄ (Wh)	Sample A: 47.92 Sample B: 47.50	47.71		47.71
5. Standby mode power, P _{sb} (W)	-	-		-
6. No battery mode power (W)	-	-		-
7. Off mode power, P _{off} (W)	-	-		-
8. Unit Energy Consumption, UEC(kWh/yr)	Sample A: 0.73 Sample B: 0.72	0.73	0.75	0.75
9. Ambient:	Temperature: 24 °C			



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Small Charger Proposed Regulations:

<i><u>Performance Parameter</u></i>	<i><u>Standard</u></i>
<u>Maximum 24 hour charge and maintenance energy (Wh)</u> <u>(E_b = capacity of all batteries in ports and N = number of charger ports)</u>	<u>For E_b of 2.5 Wh or less:</u> $16 \times N$
	<u>For E_b greater than 2.5 Wh and less than or equal to 100 Wh:</u> $12 \times N + 1.6E_b$
	<u>For E_b greater than 100 Wh and less than or equal to 1000 Wh:</u> $22 \times N + 1.5E_b$
	<u>For E_b greater than 1000 Wh:</u> $36.4 \times N + 1.486E_b$
<u>Maintenance Mode Power and No Battery Mode Power (W)</u> <u>(E_b = capacity of all batteries in ports and N = number of charger ports)</u>	<u>The sum of maintenance mode power and no battery mode power must be less than or equal to:</u> $1 \times N + 0.0021 \times E_b \text{ Watts}$



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Summary of test results:

When tested at 5 Vdc:

Total charger input energy is 47.71 Wh, less than 63.12 Wh.

The sum of Maintenance Power and No Battery Power is 0.10 W, less than 1.07 W.

The results only relate to the item tested



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Photos of the appliance:

External view





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Equipment List

Reg. No.	Equipment Name	Brand Name	Type / Model	Cal. Date	Next Cal.
RL024	DC Power Source	Chroma	62006P	-	-
EC0223	Power Analyzer	N4L	PPA2530	2016/05/25	2017/05/24
EC0315	Battery Test Machine	GWINSTEK	GBT-2211	2016/10/18	2017/10/17